

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (currently amended) SMC (Sheet Moulding Compound) for producing fibre-reinforced thermosetting components consisting of a resin matrix (2) which is fibre-reinforced with unidirectional fibres (UD fibres) (7) arranged in axial alignment and advantageously with additional cut fibres (random fibres) (4) arranged in non-aligned manner in the resin matrix (2), characterised in that several layers of SMC containing UD fibres (7) with, at least one layer having a different axial alignment from ~~one~~ another layer, are arranged in the component.
2. (previously presented) SMC according to Claim 1, characterised in that the random fibres (4) are glass fibres and the UD fibres (7) are carbon fibres or vice versa.
3. (previously presented) SMC according to Claim 1, characterised in that the UD fibres (7) and the random fibres (4) are carbon fibres.
4. (previously presented) SMC according to Claim 1, characterised in that the UD fibres (7) are carbon fibres and no random fibres (4) are used.

5. (previously presented) SMC according to Claim 1, characterised in that the UD fibres (7) are "heavy tow" carbon fibre tows or "heavy tow" broad-strip carbon fibre tows.

6. (previously presented) SMC according to Claim 1, characterised in that the UD fibres (7) are shortened by incisions in the finished SMC to produce flowability in the fibre direction.

7. (previously presented) SMC according to Claim 6, characterised in that the cutting width of the tool for cutting the UD fibre layers is between 2 mm and 15 mm.

8. (previously presented) SMC according to Claim 1, characterised in that a different resin matrix (2) is used for the random fibres (4) and the UD fibres (7).

9. (previously presented) SMC according to Claim 1, characterised in that, to check the UD fibre directions, individual UD glass fibres are introduced into the matrix (2) in the direction of the UD carbon fibres (7) as contrast fibres.

10. (previously presented) SMC according to Claim 1, characterised in that the SMC weight per unit area is less than 1000 gram/m².

11. (previously presented) SMC according to Claim 1, characterised in that the resin matrix (2) contains electrically conductive additives.

12. (previously presented) Process for producing a fibre-reinforced SMC according to Claim 1, characterised

- in that SMC mats with a single layer of UD fibres (7) are produced and
- in that a plurality of SMC mats is arranged, prior to further processing to form the component (16), with multi-axial alignment of the UD fibres (7) by building up into a stack (19).

13. (previously presented) Process according to Claim 12, characterised in that all the UD fibre layers (7) used are aligned in the 0° direction and any desired number of fibre layers (7) are used.

14. (previously presented) Process according to Claim 12, characterised in that at least four UD fibre layers (7) are arranged.

15. (previously presented) Process according to Claim 14, characterised in that the four UD fibre layers (7) have the following alignment

0°, 90°, 90°, 0° or 0°, 90°, 0°, 90°.

16. (previously presented) Process according to Claim 12, characterised in that at least six UD fibre layers (7) are arranged.

17. (previously presented) Process according to Claim 16, characterised in that the six UD fibre layers (7) have the following alignment

0°, 90°; +45°, -45°, 90°, 0°.

18. (previously presented) Process according to Claim 12, characterised in that eight UD fibre layers (7) are arranged.

19. (previously presented) Process according to Claim 18, characterised in that the eight UD fibre layers (7) have the following alignment

$0^\circ, 90^\circ; +45^\circ, -45^\circ, +45^\circ, -45^\circ, 90^\circ, 0^\circ$.

20. (previously presented) Process according to Claim 12, characterised

- in that the SMC mats are cut into strips (12) and wound onto spools or reels (8),
- in that the strips (12) are cut to length and arranged in rectangular blank layers and
- in that the individual blank layers (11) are built up into a stack (19) on a rotary table (14).

21. (previously presented) Process according to Claim 20, characterised in that the stack (19) is placed into the mould (press) (18) for producing the component (16) or else is preshaped by prepressing for the purpose of securing.

22. (previously presented) Process according to Claim 21, characterised in that the press for preshaping is an inverse form of the mould for producing the component (16).

23. (previously presented) Process according to Claim 1, characterised in that the strips (12) are wound onto spools with a core diameter of greater than 200 mm and an outside diameter of greater than 500 mm.

24. (previously presented) Process according to Claim 1, characterised in that the SMC is flowable and the blank size is always smaller than the laid out component surface.

25. (previously presented) Component made of fibre-reinforced thermosets, characterised in that this component is produced from an SMC according to Claim 1.

26. (previously presented) Component according to Claim 25 for use as an exterior part of a motor vehicle.

27. (new) A process for producing a multi-layer fibre-reinforced SMC (Sheet Moulding Compound) for producing fibre-reinforced components, comprising:
 providing a plurality of SMC mats, each SMC mat comprising a resin matrix fibre-reinforced with unidirectional fibres (UD fibres) arranged in axial alignment; and
 arranging the plurality of SMC mats in a stack with at least one of the plurality of SMC mats having a direction of axial alignment of the UD fibres rotated with respect to a direction of axial alignment of the UD fibres of another of the plurality of SMC mats.

28. (new) The process according to Claim 27, wherein each SMC mat includes additional cut fibres (random fibres) arranged in a non-aligned manner in the resin matrix.

29. (new) The process according to Claim 27, wherein the plurality of SMC mats includes four SMC mats.

30. (new) The process according to Claim 29, wherein the four SMC mats have the following alignment

$0^\circ, 90^\circ, 90^\circ, 0^\circ$.

31. (new) The process according to Claim 27, wherein the plurality of SMC mats includes six SMC mats.

32. (new) The process according to Claim 31, wherein the six SMC mats have the following alignment

$0^\circ, 90^\circ, +45^\circ, -45^\circ, 90^\circ, 0^\circ$.

33. (new) The process according to Claim 27, wherein the plurality of SMC mats includes eight SMC mats.

34. (new) The process according to Claim 33, wherein the eight SMC mats have the following alignment

$0^\circ, 90^\circ, +45^\circ, -45^\circ, +45^\circ, -45^\circ, 90^\circ, 0^\circ$.

35. (new) Process according to Claim 27, characterised

- in that the SMC mats are cut into strips and wound onto spools or reels,
- in that the strips are cut to length and arranged in rectangular blank layers and
- in that the individual blank layers are built up into a stack on a rotary table.

36. (new) A multi-layer fibre-reinforced SMC (Sheet Moulding Compound) for producing fibre-reinforced components, comprising a plurality of SMC mats, each SMC mat comprising a resin matrix fibre-reinforced with unidirectional fibres (UD fibres) arranged in axial alignment; wherein the plurality of SMC mats are arranged in a stack with at least one of the plurality of SMC mats having a direction of axial alignment of the UD fibres rotated with respect to a direction of axial alignment of the UD fibres of another of the plurality of SMC mats.

37. (new) The multi-layer fibre-reinforced SMC according to Claim 36, wherein each SMC mat includes additional cut fibres (random fibres) arranged in a non-aligned manner in the resin matrix.

38. (new) The multi-layer fibre-reinforced SMC according to Claim 36, wherein the plurality of SMC mats includes four SMC mats.

39. (new) The multi-layer fibre-reinforced SMC according to Claim 38, wherein the four SMC mats have the following alignment

0°, 90°, 90°, 0°.

40. (new) The multi-layer fibre-reinforced SMC according to Claim 36, wherein the plurality of SMC mats includes six SMC mats.

41. (new) The multi-layer fibre-reinforced SMC according to Claim 40, wherein the six SMC mats have the following alignment

$0^\circ, 90^\circ, +45^\circ, -45^\circ, 90^\circ, 0^\circ$.

42. (new) The multi-layer fibre-reinforced SMC according to Claim 36, wherein the plurality of SMC mats includes eight SMC mats.

43. The multi-layer fibre-reinforced SMC according to Claim 42, wherein the eight SMC mats have the following alignment

$0^\circ, 90^\circ, +45^\circ, -45^\circ, +45^\circ, -45^\circ, 90^\circ, 0^\circ$.